

What the invention claimed is:

1. A LED (light emitting diode) manufacturing process comprising the steps of:

- (a) preparing a frame having a first leg and a second leg and
5 bonding a chip to said first leg and then soldering two ends of an electrode wire to said chip and said second leg respectively;
- (b) potting a compound into the cavity of a mold to form a first resin layer in the cavity of said mold;
- (c) hardening said first resin layer in the cavity of said
10 mold by baking;
- (d) potting a resin compound containing fluorescent materials into the cavity of said mold to form a fluorescent layer on said first resin layer;
- (e) potting a resin compound into the cavity of said mold to
15 form a second resin layer on said fluorescent layer after hardening of said fluorescent layer, and inserting said frame into said second resin layer before hardening of said second resin layer to have said chip and said electrode wire embedded in said second resin layer;
- (f) hardening said second resin layer by baking so as to
20 finish a LED (light emitting diode); and
- (g) removing said LED from said mold and then cutting off excessive part of said frame from said LED.

2. The LED manufacturing process as claimed in claim 1,

wherein said first resin layer is formed in about 25%~75% of the cavity of said mold.

3. The LED manufacturing process as claimed in claim 1, wherein said fluorescent materials for said fluorescent layer have
5 different colors including yellow, pink, red, green, and blue.

4. The LED manufacturing process as claimed in claim 3, wherein said fluorescent materials are fluorescent power.

5. The LED manufacturing process as claimed in claim 3, wherein said fluorescent materials are fluorescent chips.

10 6. A LED (light emitting diode) comprising a frame, said frame having a first leg and a second leg, a chip bonded to said first leg, an electrode wire connected between said chip and said second leg of said frame, and a packing material encapsulating said chip and said electrode wire, wherein said packing material comprises a
15 first resin layer, a second resin layer, and a fluorescent layer sandwiched in between said first resin layer and said second resin layer.

7. The LED as claimed in claim 6, wherein said fluorescent layer is evenly sandwiched in between said first resin layer and
20 said second resin layer.

8. The LED as claimed in claim 7, wherein said fluorescent layer is formed of fluorescent materials having different colors including yellow, pink, red, green, and blue.

9. The LED as claimed in claim 8, wherein said fluorescent materials are fluorescent powder.

10. The LED as claimed in claim 8, wherein said fluorescent materials are fluorescent chips.